ACCESS DB # 177472

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Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: MARK BERCH Examiner #: 59193 Date: 1/24/06
Art Unit: 1624 Phone Number: 2-0663 Serial Number: 10808600
Location (Bldg/Room#): 5C01 (Mailbox #): 5C18 Results Format Preferred (circle): (PAPER) DISK

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To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Date: _____

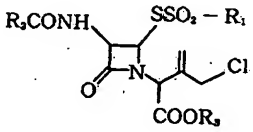
Search Topic:
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

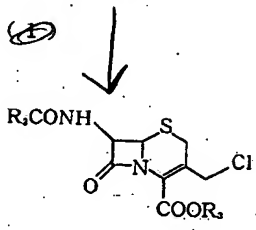
For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

CAS react.

$R_2, R_3 = C$

$R_1 = C$ | N (ring only)





Solvent must be of form R–OH

R = carbon

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STAFF USE ONLY

Searcher: _____
Searcher Phone #: _____
Searcher Location: _____
Date Searcher Picked Up: _____
Date Completed: _____
Searcher Prep & Review Time: _____
Online Time: _____

Type of Search

_____ NA Sequence (#)
_____ AA Sequence (#)
_____ Structure (#)
_____ Bibliographic
_____ Litigation
_____ Fulltext
_____ Other

Vendors and cost where applicable

_____ STN _____ Dialog
_____ Questel/Orbit _____ Lexis/Nexis
_____ Westlaw _____ WWW/Internet
____ In-house sequence systems
__ Commercial ___ Oligomer ____ Score/Length
__ Interference ___ SPDI ____ Encode/Transl
_____ Other (specify)

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=> fil casreact
FILE 'CASREACT' ENTERED AT 12:11:42 ON 03 FEB 2006

=> d his

     FILE 'HCAPLUS' ENTERED AT 11:03:13 ON 03 FEB 2006
L1             1 S US20050215782/PN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 11:03:38 ON 03 FEB 2006
L2             7 S E1-E7

     FILE 'CASREACT' ENTERED AT 11:06:26 ON 03 FEB 2006
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L4             0 S L3 SAM
L5               STR L3
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L8             0 S L7 SAM
L9             4 S L7 FUL


=> d que l9
L7               STR

RRT
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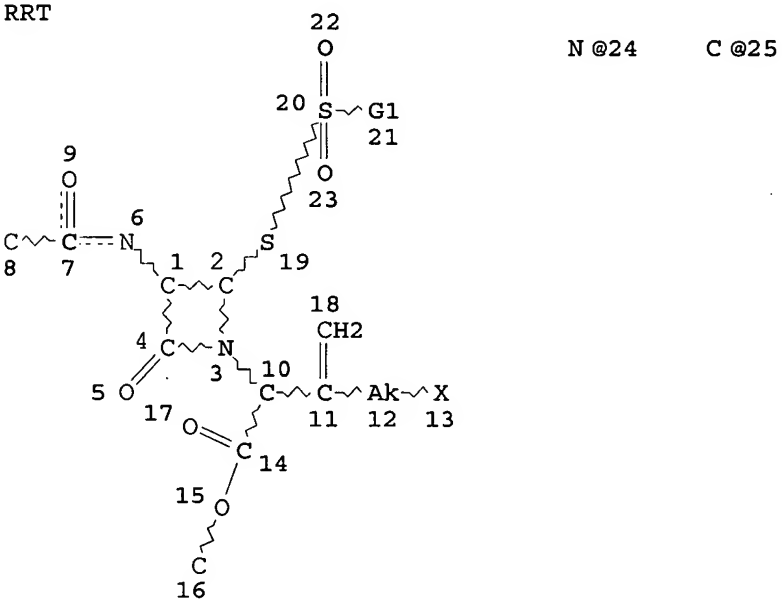

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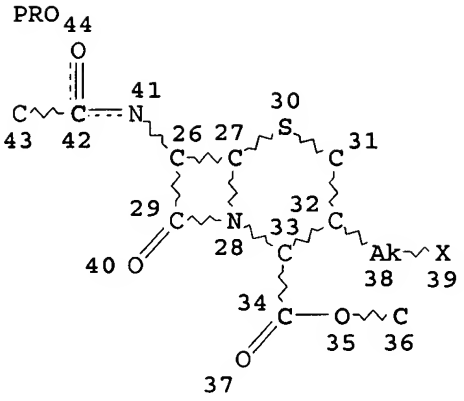

Page 2-A
VAR G1=24/25
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NSPEC IS RC AT 16
NSPEC IS R AT 24
NSPEC IS RC AT 25
NSPEC IS RC AT 36
NSPEC IS RC AT 43
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 44

STEREO ATTRIBUTES: NONE
L9 4 SEA FILE=CASREACT SSS FUL L7 (4 REACTIONS)

=> d l9 1-4 ibib abs crd

L9 ANSWER 1 OF 4 CASREACT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 143:346982 CASREACT
TITLE: Process for preparing crystalline 3-chloromethyl-3-cephem derivatives
INVENTOR(S): Matsumoto, Nobuo; Kawakabe, Hiroshi; Manabe, Yasuko
PATENT ASSIGNEE(S): Japan
SOURCE: U.S. Pat. Appl. Publ., 15 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005215782	A1	20050929	US 2004-808600	20040325

PRIORITY APPLN. INFO.: US 2004-808600 20040325
OTHER SOURCE(S): MARPAT 143:346982

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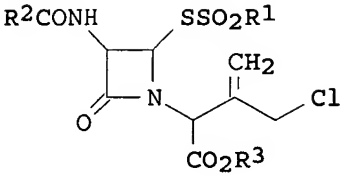

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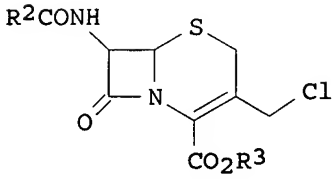
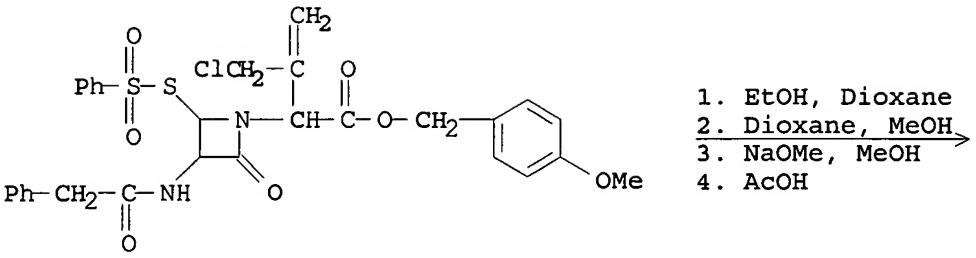


II

AB A chlorinated azetidinone derivative I [R1 = (un)substituted aryl, heterocycle; R2, R3 = (un)substituted aromatic hydrocarbon] and an alcoholate are allowed to react in a solvent containing at least one of alcs. and an ether at a pH of 8 or less, and thus, 3-chloromethyl-3-cephem derivative II is prepared Thus, I [R1 = Ph, R2 = CH2Ph, R3 = CH2C6H4OMe-4] in dioxane was treated with NaOMe in MeOH to give 94.1% II [R2 = CH2Ph, R3 = CH2C6H4OMe-4].

RX(1) OF 1



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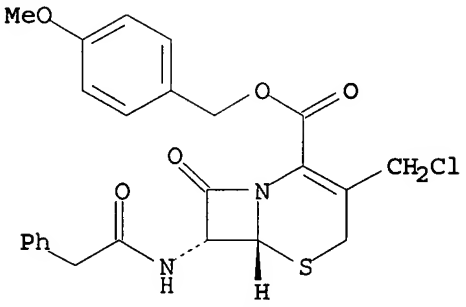

94%

NOTE: second stage methnaol added to recatant in dioxane before addn.; fourth stage reactant and reagent added simultaneously via dripping from addn. funnels; last stage neutralization
CON: STAGE(1) room temperature -> 0 deg C
STAGE(2) -2 - 2 deg C, pH 4
STAGE(3) 4 hours, -2 - 2 deg C; 0.25 hours, -2 - 2 deg C, pH 7 - 8
STAGE(4) 0.5 hours, 0 deg C, pH 4 - 5

L9 ANSWER 2 OF 4 CASREACT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 142:316614 CASREACT
TITLE: Process for producing 3-chloromethyl-3-cephem derivative
INVENTOR(S): Matsumoto, Nobuo; Kawakabe, Hiroshi; Manabe, Yasuko
PATENT ASSIGNEE(S): Nippon Chemical Industrial Co., Ltd., Japan
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005026176	A1	20050324	WO 2004-JP12925	20040906

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,

KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,
PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,
CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,
MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI,
CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: JP 2003-316386 20030909
OTHER SOURCE(S): MARPAT 142:316614
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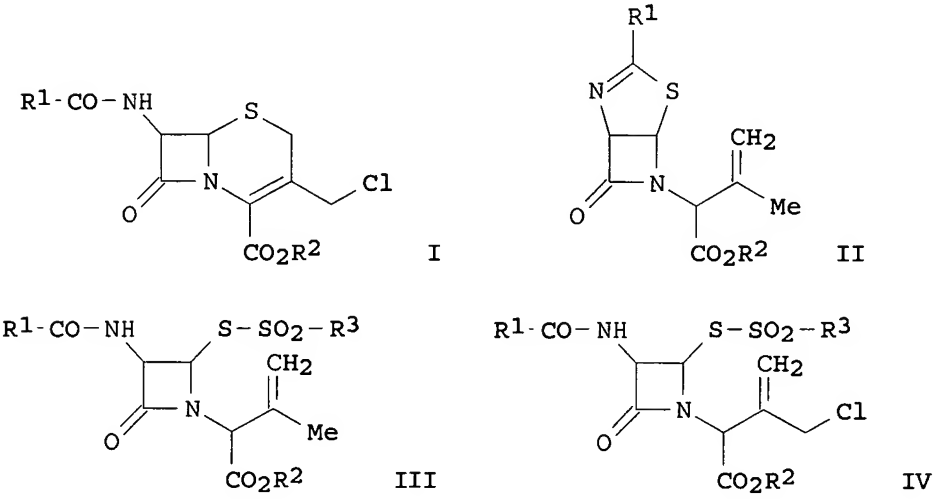
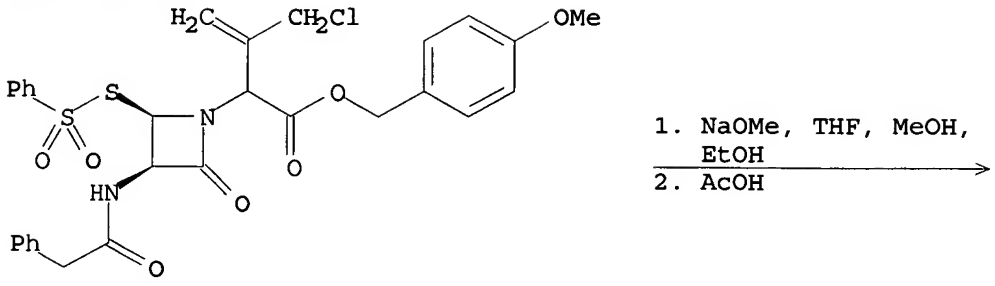
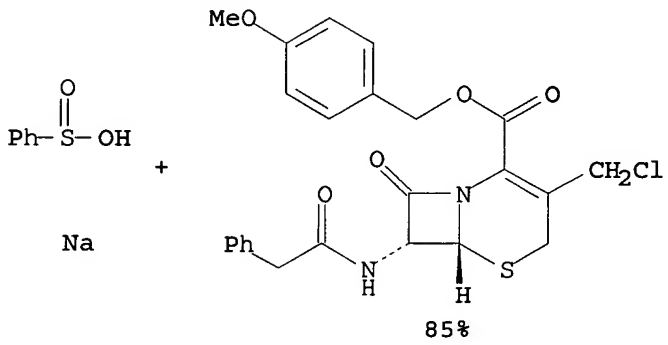


AB An industrially advantageous process for producing 3-chloromethyl-3-cephem derivative crystals I (R1, R2 = aryl). The process for 3-chloromethyl-3-cephem derivative production comprises: a first step in which a thiazolineazetidinone derivative II is reacted with a sulfonyl halide R3SO2X [R3 = (un)substituted aryl, heterocyclyl; X = halo] in the presence of an acid in a solvent to obtain azetidinone derivative III; a second step in which the azetidinone derivative III is reacted with a chlorinating agent in an organic solvent to obtain a chlorinated azetidinone derivative IV; and a third step in which the chlorinated azetidinone derivative IV is reacted with an alcoholate R4OM (R4 = organic group; M = alkali metal) at a pH of 8 or lower in a solvent comprising an alc. and an ether and a 3-chloromethyl-3-cephem derivative I is recovered in the form of crystals. Thus, crystals of I (R1 = PhCH2, R2 = 4-MeOC6H4CH2) was prepared from the corresponding II.

RX(3) OF 12



(step 1)



CON: STAGE(1) 5 hours, -2 - 2 deg C, pH 7 - 8; 0.25 hours, 0 deg C
STAGE(2) pH 4 - 5

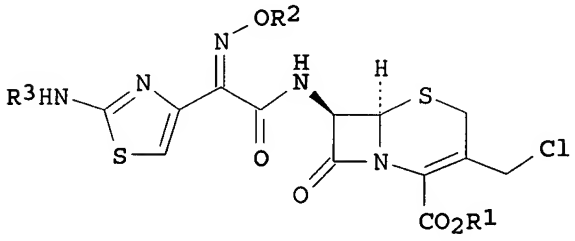
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 4 CASREACT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 140:76954 CASREACT
TITLE: Process for preparation of cepham derivatives from penam derivatives
INVENTOR(S): Deshpande, Pandurang Balwant; Palanisamy, Senthilkumar Udayampalayam; Ramar, Padmanabhan
PATENT ASSIGNEE(S): Orchid Chemicals and Pharmaceuticals Limited, India
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004000848	A1	20031231	WO 2002-IB3064	20020802
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,				

KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE,
SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,
DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,
SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

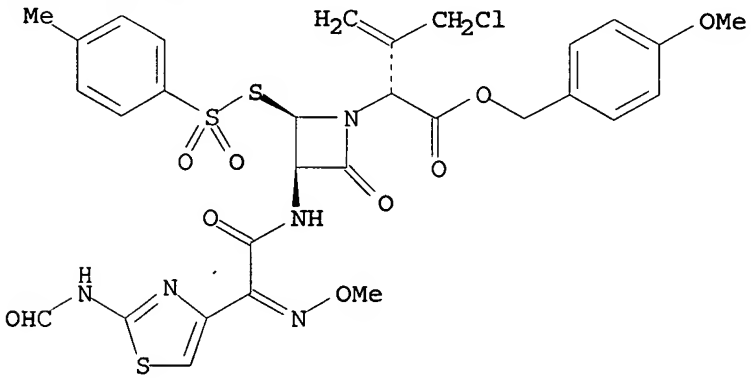
US 2004002600 A1 20040101 US 2002-207110 20020730
PRIORITY APPLN. INFO.: IN 2002-MA467 20020620
OTHER SOURCE(S): MARPAT 140:76954
GI



I

AB The present invention relates to a process for the preparation of cephalosporin derivs. such as I [R1 = p-methoxybenzyl, p-nitrobenzyl, o-chlorobenzyl, diphenylmethyl; R2 = Me, CRaRbCO2Rc; Ra, Rb = H, Me; Rc = H, alkyl; R3 = H, acyl, phenacyl, formyl, trityl] from 6-aminopenicillanic acid (II). Thus, cepham derivative I (R1 = CH2C6H4-4-NO2; R2 = Me; R3 = CHO) was prepared via a multistep synthetic sequence starting from II, S-benzothiazole-2-yl 2-(2-aminothiazol-4-yl)-2-(syn-methoxyimino)thioacetate, p-methoxybenzyl chloride and 2-mercaptobenzothiazole.

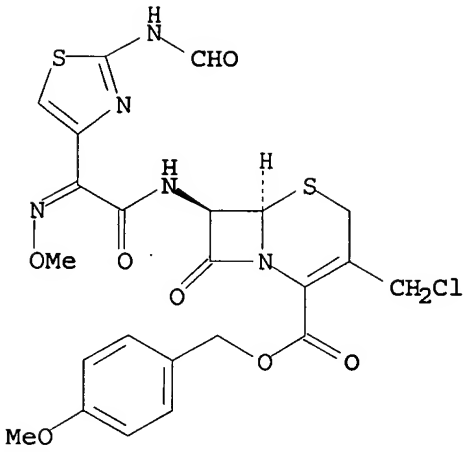
RX(7) OF 52



(step 1)

1. NH3, DMF
2. HCl, Water

RX(7) OF 52



CON: room temperature -> -35 deg C

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

This is World

L9 ANSWER 4 OF 4 CASREACT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 140:59457 CASREACT
TITLE: Preparation of crystals of 3-chloromethyl-3-cephem derivatives as intermediates for antibiotics
INVENTOR(S): Matsumoto, Nobuo; Kawakabe, Hiroshi; Manabe, Yasuko
PATENT ASSIGNEE(S): Nippon Chemical Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp., Division of Jpn. Kokai Tokkyo Koho Appl. No. 2003 46,421.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004002451	A2	20040108	JP 2003-203682	20030730
JP 3537050	B2	20040614		
CN 1539840	A	20041027	CN 2003-150030	20030421
PRIORITY APPLN. INFO.:			JP 2002-119038	20020422
			JP 2003-46421	20030224

OTHER SOURCE(S): MARPAT 140:59457
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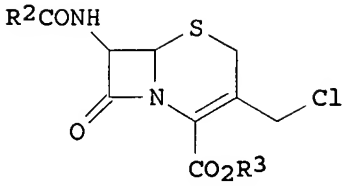

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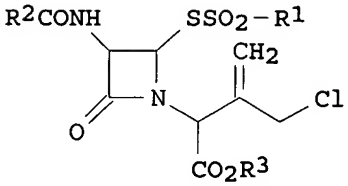
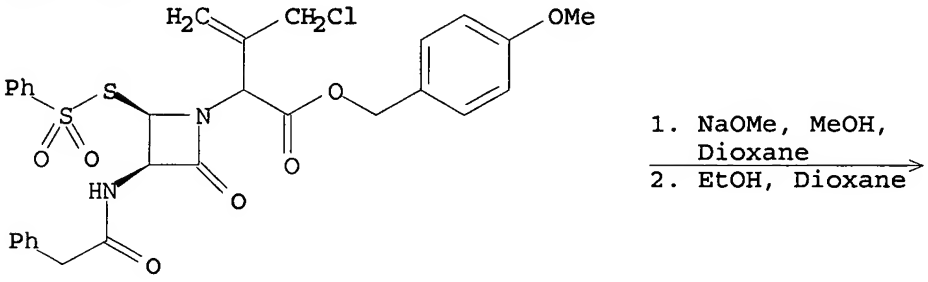


II

AB Title derivs. I [R2, R3 = (un)substituted aromatic] are prepared by treatment of azetidinones II [R1 = (un)substituted aryl, (un)substituted heterocyclyl; R2, R3 = same as above] with alcoholates at pH ≤8 in the presence of alc.-containing solvents. Thus, dioxane-MeOH solution of II (R1 = Ph, R2 = PhCH2, R3 = 4-CH2C6H4OMe) and MeONa/MeOH were simultaneously dropwise added to dioxane-EtOH mixture at -2 to 2° over 4 h to give 85.1% 3-chloromethyl-3-cephem derivative crystals, which showed good storage stability.

RX(1) OF 1



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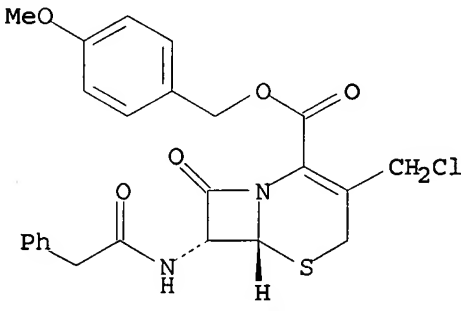

85%

NOTE: alternative prepn. shown
CON: STAGE(2) room temperature -> 2 deg C, pH 4; 4 hours, 2 deg C, pH 4 -> 8; 30 minutes, -2 - 2 deg C